# TECHNICAL NOTES

Subject: LEWIS' WOODPECKER*

General
The Lewis' woodpecker (Melanerpes lewis) is a large, black-backed woodpecker associated with cottonwoods, scrub oaks, and ponderosa pine.
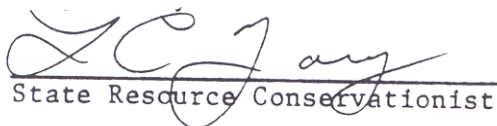
Food Requirements
In California, one study stated that "Lewis' woodpeckers feed largely on adult emergent insects, complemented by fruits and mast during fall and winter months when such insects are less plentiful." In contrast to most other woodpeckers, Lewis' is adapted for feeding in flight and foraging rather than probing for insects. During the summer season, they spend up to 60 percent of their feeding time in flycatching, 30 percent in ground-brush foraging, and 10 percent in gleaning insects from tree surfaces. In late summer, the diet *was* supplemented with various fruits, berries, and seeds.

After arriving on wintering grounds in Oregon in the fall, Lewis' woodpeckers collected and stored acorns and other mast, including commercial nuts. Corn kernels were collected when available in Colorado. In California, mast was stored in natural crevices such as cracks in power poles and dead trees or behind the checked bark of oaks. Winter stores of acorns and other foods were vigorously defended. During the winter months, 70 percent of feeding time was spent in harvest and storage, 15 percent in flycatching, and 13 percent gleaning insects from tree trunks.

LEWIS'
WOODPECKER
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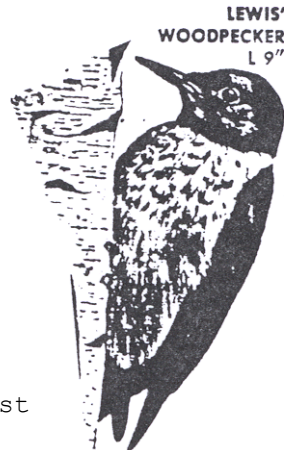
Prepared by: Richard Rintamaki, State Biologist

State Resource Conservationist

*Information taken from Ecoregion M3113 Handbook and Habitat Suitability Index Models, Wildlife Species Narratives (literature searches), U.S. Fish and Wildlife Service, various dates between 1978-1984.

Water Requirements
No information regarding water requirements for the Lewis' woodpecker was found in the literature.

Cover Requirements
Lewis' woodpeckers require open woodlands as a result of their feeding patterns. Dense forests with closed canopies restrict vision and movement and eliminate the brushy understory which provides habitat for numerous insects. In Oregon, wintering areas have oaks present and have sufficiently mild winters for some emergent insects to be available.

Reproductive Requirements
Lewis' woodpeckers are cavity nesters, but are not well suited for excavating their own cavities except in dead or dying trees. The common characteristic of good breeding habitat is openness. Throughout the range of the Lewis' woodpecker, parklike ponderosa pine (Pinus ponderosa) with brushy undergrowth is probably the major breeding grounds; however, at lower elevations, riparian woodlands are the main breeding grounds. Riparian woodlands, especially cottonwood (Populus spp.) groves, are generally open with dead trees for roost and nest sites, lush understory vegetation, and high insect populations.

Suitable nest cavities occur in snags of at least 12 in (30.5 cm) dbh and greater than 6 ft (1.8 m) in height. Suitable cavities are 2 to 3 in (5.1 to 7.6 cm) in diameter with cavity depth ranging from 9 to 30 in (22.9 to 76.2 cm). One study reported that an average of one snag per acre (2.5 per ha) would support a maximum Lewis' breeding population. The percentage of maximum population that can be supported in an area decreased proportionately with the number of snags per acre.

Hole nesters generally face a shortage of nesting sites where trees occur in clumps. In areas of high demand for sites, Lewis' woodpeckers may nest within a short distance of each other. One study reported three holes were occupied by Lewis' woodpeckers in each of two trees less than 470 yds (400 m) apart. Managed forests generally have fewer available nesting sites than do natural forests since snags, diseased, and damaged trees are usually removed in a managed forest. Lewis' woodpeckers exhibit a strong pair bond and high nest fidelity, returning to nest in the same cavity in consecutive years.

Special Habitat Requirements
Scanning perches are an important, but not usually limiting, component of year-round habitat. Scanning perches are selected to provide a clear view of the surrounding area and may range from low stumps in fenceposts to tall trees, depending on the species of insect being hunted.

Interspersion Requirements
Vertical interspersion of cover is important in satisfying the requirements for breeding and, to a lesser degree, for winter habitat. Open woodlands with a brushy understory (to support insect populations) are necessary. Logged or burned forests that do not revert to a brushy stage (e.g., as a result of forest planting) do not become suitable

breeding habitat for the Lewis' woodpecker.

Lewis' woodpeckers defend only the immediate area around the nest site; a large territory is not defended because of the diffuse and sporadic nature of their food supply. In contrast, one study reported territories of 2.5 to 15 acres (1-6 ha) per breeding pair. During acorn harvest and storage in the fall, Lewis' woodpeckers become increasingly defensive; rather than defending a winter territory, they store their winter food and vigorously defend the storage area.

Special Considerations
Although Lewis' woodpeckers are migratory, wintering areas are based on the available mast supply. Spacing of individuals on wintering grounds is probably determined by food or storage-site availability and competition.

Suitable Lewis' woodpecker habitat can be eliminated by man's activities. Grazing may eliminate brushy undergrowth and the insects on which Lewis' woodpeckers feed. Forestry practices of clean Jogging (removing snags, diseased trees, and slash) and eliminating brushy growth by planting and herbicide application may destroy suitable breeding habitat. One study recommends forest management practices that provide snags and dead trees and leaving slash on the ground for foraging habitat. Another study reported that Lewis' woodpeckers can do considerable damage to commercial nut orchards during the fall and winter.